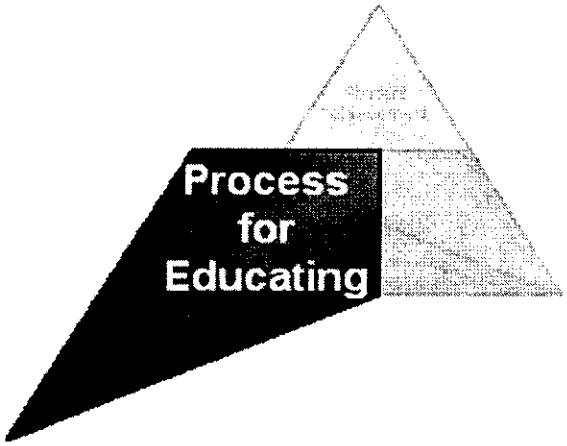
SECTION 3: THE PROCESS FOR EDUCATING (TOC)



3.1 HOW CAN WE TRANSFORM INSTRUCTION WITHIN APS?

The second component of the TMP model is a focus on the Process for Educating. We will define the necessary elements to accelerate student achievement by using technology to enhance and transform instructional practices.

As mentioned earlier, the district has committed to a set of Redesign Essentials that are being used to transform the instructional practices and environments in our schools. Again, this plan supports, rather than replaces, those redesign essentials. They exist in four focus areas:

1. High standards
2. Professional development
3. quality teaching
4. shared accountability

Everyday, educators use various methods, tools, and techniques to engage learners, looking for the spark that occurs when a child becomes engaged and embraces the learning process. Historically, educators have used traditional methods, tools, and techniques -- many of which did not rely on the use of technology. APS believes that technology will transform current practices and provide unique and compelling reasons for learners to be engaged.

Many key national leaders throughout the country believe we must improve student achievement and to prepare students for the 21st century. We at APS believe that all children can learn and that we must create a multitude of opportunities for children to foster a passion for learning. The creative and innovative use of technology to better integrate APS' standards-based learning into every day's lessons is the focus of this section.

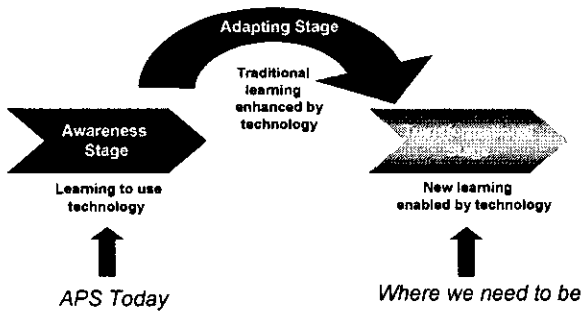
> "The single largest factor affecting academic growth of student populations is differences in effectiveness of individual classroom teachers."
>
> *Chris Pipho, Phi Delta Kappan*

> "What teachers know and are able to do makes the crucial difference in what children learn."

National Commission on Teaching and America's Future,
"What Matters Most: Teaching for America's Future"

To fully support our efforts to transform our Process For Educating, we focused on activities required within each of the key organizational elements: strategy, people, process, and technology. Our overall **strategy** for transforming the Process for Educating is to build the capacity of our teaching professionals through comprehensive professional development. In addition, our teaching professionals will be provided the tools and resources necessary to infuse technology into APS' standards-based lessons. Our **people** will begin their own personal transformation as they apply new technology understanding and skills to their everyday lives, both personal and professional. The Raising Educational Standards, Professional Excellence, and Communication Through Technology (RESPECTT) professional development program provides the foundation for this personal transformation. In turn, our people will drive change within our education **process** by developing technology infused lesson plans that provide more learning opportunities that are engaging and foster a love of learning. Laptop computers, appropriate software, and Internet connectivity provides the **technology** element through which this transformation will be facilitated.

By appropriately applying technology, we have the ability to promote transformation of the way we teach. In addition, we will provide new ways for students to gain access to information and learning opportunities. The graphic below depicts key interactions and relationships that must be addressed as we move towards greater organizational transformation.



Transformation of our organization and of the way we teach will begin with focused well-planned Professional Development. Through the use of technology, it will be possible to increase the transfer of knowledge, support higher levels of thinking, and ultimately, foster self-directed learning. For technology to become fully integrated into classroom activities, it must be personalized by the teacher and incorporated into classroom lesson plans. This transformation process requires tremendous time, resources, and commitment from those individuals most closely associated with APS' critical activities and processes.

The district has implemented a cluster-based model to better support the efforts of those that are implementing improvement. This cluster model shifts more resources and responsibility to the actual school site. A cluster is a PreK-12 alignment of schools and is comprised of a high school and it's associated the middle and elementary "feeder" schools. Each school will create

a site instructional team to focus school-wide improvement efforts to attain individual school goals. The team varies in size between elementary and high schools.

The site instructional team is made-up of the school instructional leader, and key teachers from the staff. An elementary team might have the principal, math and literacy leaders, and grade level representation. At a high school the team might be composed of the instructional leader and key teachers from each department. These teams will use data to identify learning needs and goals for the school. One of the key tasks of this group is to set up a strategic multi-year learning plan and a professional development model to address their learning concerns. In order for this team to understand how technology can effectively address their learning concerns they must first understand how to use and integrate technology in to their day-to-day activities.

Each member of this team will be provided a laptop computer and a two-week intensive program on technology integration during the summer. The summer program is called Raising Educational Standards, Professional Excellence, and Communication Through Technology (RESPECTT). More information on RESPECTT can be found on our web site at www.aps.edu. This team will study standards, literacy, redesign essentials, and the role technology will play through proper integration. A full time technology resource teacher will be assigned to work with the school teams in the cluster and provide support and mentoring throughout the school year.

During the school year the members of the Site Instructional Team will work with departments or teams of teachers. Because teachers are developing lessons specific to their grade level or content area, there is greater ownership and an increased likelihood of use throughout the school year. The Site Instructional Team members will assist in identifying how to integrate technology, at the school, and develop an aligned technology plan with the cluster and the district.

At the end of Year One, each Site Instructional Team member will identify at least one other teacher, on staff, to collaborate regarding the use of technology to improve student learning. This staff member would also receive a computer. This doubles the number of technology literate teachers each year. Ownership is critical to this plan. All teachers must take ownership of technology. School technology plans will transform into school learning plans supported by technology.

Can We Leverage Our Own Success? Here at APS, we are moving forward and integrating technology into how we teach and manage our organization. However, additional processes must be implemented to disseminate the valuable lessons learned from these unique APS experiences. The following APS "success" stories focused on students, teachers and administrators indicate the potential for creating technology enhanced learning opportunities and experiences within our district:

School Location /Division	Description
Students at Zia Elementary School	One example of an innovative technology initiative is Zia Elementary School's student participation in the ThinkQuest competition. ThinkQuest is a learning adventure that encourages students around the world to build Web pages to demonstrate results of a research project. At Zia, Native American students developed web sites that documented their cultural history; customs and traditions for a project *Come Share Our World.* These students not only learned about creating web pages, but also were also able share their information in a manner not usually available to them.
Teachers at Petroglyph Elementary School	Teachers at Petroglyph Elementary School formed a technology study group. Approximately 8-10 core teachers voluntarily meet once a month for 2 hours to discuss technology integration, curriculum issues, current trends, and best practices. These discussions help in their development of technology infused lesson plans. The group uses the National Education Technology Standard in both infrastructure and usage of computers. This effort highlights the importance of continued professional development for the continued success of technology in classrooms.
Administrators Hayes Middle School	Every teacher and administrator at Hayes Middle School has access to student data on their desktop through the current Student Information System. Administrative staffs are able to answer questions from parents while they are on the phone, without having to request the data from Central Office. The new Student Information System, provided through this technology plan, will allow that access to every administrator district-wide.

These are just a few examples of how APS educators are using technology to increase student achievement and help learners develop valuable life and work skills. These "field experiences" provide APS with a glimpse into the future and provides valuable information and insight into potential ways technology can be used to engage learners. This information will be shared throughout the district at all levels. Key *lessons learned* from these APS technology initiatives and other best practices will support the continuous improvement of technology-infused instruction.

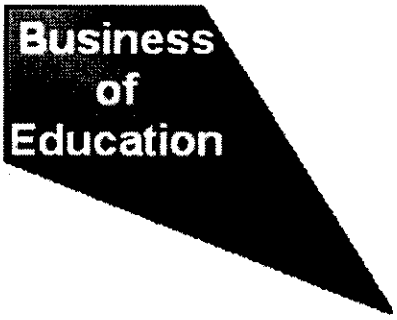
3.2 Major Activities and Processes

This table contains the major activities and projects that directly impact student learning. Click on the project title to go to the project detail.

Project ID	Project Title	Supports District Goal:	Method of Support
PE-1	Handheld R & D – focused on teachers and administrators	1: Students demonstrate academic excellence	Investigates the options for teacher and administrator use of handheld devices to enhance the curriculum
PE-2	RESPECTT phase II	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Develops the content of phase II pf the RESPECTT program, which focuses on alignment of technology activities at a school with their instructional programs
PE-3	Integration of technology with other departments (A2L, Athena)	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Assure alignment of the district's instructionally-focused technology systems
PE-4	EPSS technology alignment with instructional goals	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Assure alignment of technology implementation at a school with the school's EPSS
PE-5	Learning Portal	5: A mutually agreed-upon continuum of APS, parent, and community partnering is demonstrated at all levels	Allows parent access to instructional information, such as lessons, instructional resources, student performance indicators, and homework assignments
PE-6	Ongoing RESPECTT program	7: APS employees demonstrate high performance	Continues technology integration professional development to ensure high levels of staff skills and integration competencies
PE-7	SIS role in the classroom	7: APS employees demonstrate high performance	Assures that instructional staff can make optimal use of the data provided

			by the student information system in order to provide instruction that fits each student's documented needs
PE-8	Online resources for teachers	7: APS employees demonstrate high performance	Provides a rich suite of online material covering both instructional content and methods

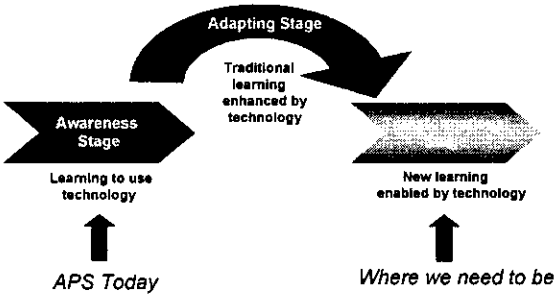
SECTION 4: THE BUSINESS OF EDUCATION (TOC)



The third component of the TMP model is the Business of Education in which we focus on improving the business and human resources functions.

The "business operations" of APS should be managed through an integrated system with efficient and automated processes, while effectively minimizing costs. Similar to a private sector business, the District Administration creates numerous business transactions that must be captured and processed, such as paying a vendor for teaching materials or deducting money from a school budget to purchase new desks.

4.1 HOW CAN WE TRANSFORM THE BUSINESS OF EDUCATION?



Business systems are the primary tools to track, process, capture and report business transactions. Management relies on this critical information to make sound decisions in the best interest of the children and community we serve. The district's information needs have changed and therefore our information technology systems must also change. We are no longer able to effectively modify our current legacy systems to satisfy our information needs.

Old legacy systems are inflexible causing the district to develop departmental systems leading to "islands of information" and less effective student based decisions

In addition to older information technology systems that do not meet our current functional requirements, APS is also hindered by a lack of integration between these systems. Smaller, stand-alone IT systems often described as "islands of information," make efficient sharing of critical information extremely difficult. These "islands of information" have developed because of a great need to track and analyze data to support better decision-making. Although short-term information needs may have been satisfied by these systems, their longevity and our growing dependency on them have created a multitude of labor-intensive workarounds and exception-based processes. What was

initially developed to increase productivity has, over time, reduced overall efficiency and productivity. Unnecessary district resources have been expended to compensate for the lack of appropriate systems integration.

As in the Process for Educating, the key elements of strategy, people, process, and technology must be adequately addressed. Here, in the Business of Education, our **strategy** is to fundamentally change how we use information to manage our organization. This will be done by implementing new business applications that provide greatly needed increased functionality and sharing of critical management data. All of APS' business personnel will be involved with the implementation of these systems. Professional development for our **people** will be a critical success factor to facilitate acceptance of new methods of performing everyday operational activities. Our **processes** will be redesigned, incorporating best practices, so they are streamline and efficient. These changes will be facilitated by new **technology** including high-speed computers and best of breed software applications. Without fundamental changes in strategy, people, and processes, our investment in technology hardware, software, and training will be wasted.
Through our Technology Master Plan efforts, examples of functions with stand-alone or legacy support systems have been identified. These examples represent tremendous opportunities for APS to realize increased efficiency through systems integration and include:

- **Maintenance and Operations** - operates six stand-alone systems to support various department functions.
- **Fleet Maintenance** – maintains a work order system, several Microsoft Access databases that handle work order, bidding processes, FIS inventory, and FIS purchasing systems.
- **Finance** - utilizes three separate general ledger systems (Operational, Federal and Capital Outlay) forcing the district to manually close out financial reporting in each separate system and then manually consolidate the information into consolidated financial reports. In addition, because the Financial Information System (FIS) is not integrated with all other business systems within the district, inefficient duplicate data entry of information is common.
- **Human Resources** – uses the legacy system called PAY. This system is the primary technology support for the HR and Payroll functions. Heavy manual processing of the substitute teacher payroll as well as the processing for all employee benefits significantly adds to the cost as well as extends the time required to process this information

Multiple stand-alone systems, as described above, force APS to create and perpetuate cumbersome and complicated business processes. Examples of these types of business management processes include:

- **Purchasing** - generally uses approved vendor lists or blanket purchase orders to ensure that the purchases are made from the approved vendors. These lists or blanket purchase

orders are not easily accessible requiring extra time to identify potential vendors and items.

- **Budgeting** – requires schools and departments to create their annual budgets in spreadsheets. The budgets are then manually uploaded into the system after final review and approval. If revisions are made during the budget development process at the school or department level, the overall District budget must then be manually updated to reflect the changes.
- **Payroll & Benefits** – uses paper forms to gather much of the time and attendance information. These forms are sent to a centralize data entry function to enter into the computer system. Processing and administration of benefits is also conducted manually. The lack of effective technology systems manifests in errors that require labor-intensive workaround procedures. In addition, these cumbersome processes have contributed to low employee satisfaction.
- **Fixed Assets** – requires additional work when a fixed asset is purchased. For example, when a computer is purchased for a school, three different people enter product information (e.g., make and model), into three disparate systems.

Integration of new systems that allows the implementation of best practices will allow the district to be transformed into a highly efficient organization that can efficiently adapt to emerging requirements.

4.2 Critical TMP Business of Education Activities

To appropriately address APS' Business of Education technology needs, we must look closely at our core business systems: Financial Information System (FIS) and Human Resource System (HRS). These systems comprise the foundation of our district management information system. Replacement of these legacy systems with newer integrated systems that support best practices will be the focus of our technology efforts related to the Business of Education.

Incorporation of Best Practices is the key to developing an effective and efficient support organization. Existing processes will be reviewed and compared to best practices. It is essential that changes to processes occur before configuring and installing a new ERP system. All key processes will be defined and a GAP analysis prepared for senior leadership consideration.

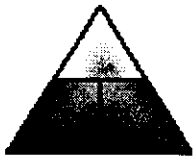
Enterprise Resource Planning (ERP) systems support the districts administrative functions such as financial reporting, purchasing, accounts payable, accounts receivable and fixed assets.

Enterprise Resource Planning System (ERP) – An ERP system is packaged software designed to plan and control resources across the entire organization. It is composed of integrated applications created to serve and support multiple business functions and requirements. Characteristics of an ERP system are the same look and feel, consistent platform, consistent databases, same code throughout, and abundant vendor support. Users can also share data without using extensive and costly transfer of data to different "islands of information".

District Administration should be managed as an efficient operating unit with automated processes and more accountability so principals, teachers, secretaries and business administrators have more time to focus on student achievement. Implementing a new ERP system will enable the district to improve the quality and effectiveness of education by processing information efficiently and providing up-to-date information to all stakeholders in a timely manner. This will reduce costly resources that can be redirected to the education of the students.

Implementing an ERP system provides APS with the following benefits:

- Provides extensive R & D into best practices throughout the K-12 industry
- Reduces administrative costs and provide more timely support to the schools
- Improves budget process to involve the schools in the creation of the budget and provide real-time budget to actual expense comparisons throughout the year
- Improves financial management data, controls and tools
- Reduces paper documents by providing on-line formats for quickly entering and retrieving information
- Improves timeliness of information by permitting daily posting to general ledger instead of monthly posting
- Allows quick responses to changes in business operations
- Reduces redundant data-entry across organization
- Improves data accuracy, relevance, and timelines
- Improves ability to make fact-based decisions and to perform trend analysis



The Human Resource System (HRS) collects and supports all district staff needs including, but not limited to, personnel, payroll, benefits and professional development.

Human Resource System (HRS) – HRS is composed of integrated applications created to serve and support functions related to district staff. While the initial implementation will be a basic package including HRS and Payroll modules, additional HRS-related modules may be implemented, including time and attendance, applicant tracking, position control, benefits, and professional development.

The implementation of an integrated HRS system will serve to automate processes and improve the accuracy, relevance, and timeliness of human resources data. This will empower APS to make decisions about human capital that are supported by accurate data, which, in turn, will serve to help APS recruit, hire, and retain quality employees. Automation of the processes through the implementation of an integrated HRS system will help increase the accuracy of employee data while drastically reducing the amount of effort required to process the payroll.

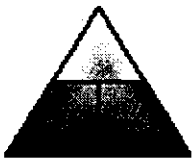
Implementing an HRS/Payroll system provides APS with the following benefits:

- Reduces redundant data-entry across organization
- Improves data accuracy, relevance, and timeliness
- Improves ability to make fact-based decisions and to perform trend analysis
- Reduces paper documents by providing standard on-line formats for quickly entering and retrieving information
- Improves response time to HRS-related staff issues
- Improves accuracy of payroll runs and reduction in time required to prepare payroll

4.3 Major Projects and Activities

This table contains the major activities and projects that directly impact student learning. Click on the project title to go to the project detail.

Project ID	Project Title	Supports District Goal:	Method of Support
BE-1	Integration of technology with other departments (e.g., ACT2000, WinOcular)	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Assure alignment of the district's business-focused technology systems
BE-2	Performance-based budgeting	4: The district demonstrates 100% alignment of programs	Provides an integrated interface between systems that house information for

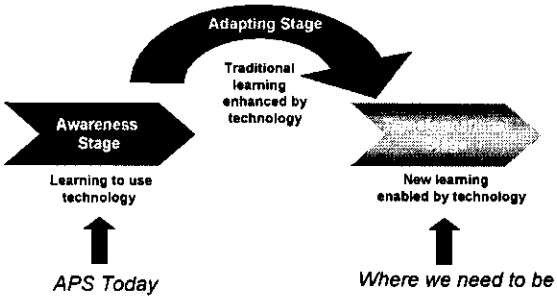


Project ID	Project Title	Supports District Goal:	Method of Support
		and the budget to district priorities	the State's performance-based budgeting reporting requirements.
BE-3	Lawson ERP	4: The district demonstrates 100% alignment of programs and the budget to district priorities	New ERP system enables better budgetary control and alignment with district programs and priorities
BE-4	HR/Pay	4: The district demonstrates 100% alignment of programs and the budget to district priorities	New HR/Pay system enables position control and better alignment of staffing with district programs and priorities
BE-5	Communication coordination	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Ensures a district-wide system of electronic communication and collaboration, enhancing the ability to align efforts and programs
BE-6	Time and attendance	4: The district demonstrates 100% alignment of programs and the budget to district priorities	New time and attendance system, interfaced with new HR/pay system, enables better alignment of staff hours with district programs and priorities
BE-7	Business portal	7: APS employees demonstrate high performance	Web-based access to business information allows employees to perform job functions
BE-8	Improved SIS processes	7: APS employees demonstrate high performance	Enables employees to more effectively serve student needs via improvements in registering, enrolling, transferring, and other student-information related processes
BE-9	Administrative systems' WBT	7: APS employees demonstrate high	Provides web-enabled, on-demand training that

Project ID	Project Title	Supports District Goal:	Method of Support
		performance	will allow employees to more effectively use the district's information systems

SECTION 5: TECHNOLOGY INFRASTRUCTURE (TOC)

5.1 HOW DO WE TRANSFORM THE TECHNOLOGY INFRASTRUCTURE?



The final component of the TMP model is the Technology Infrastructure. In this section we define the current status of technology and define the necessary activities to support the instructional and administrative needs of the district. While technology does not directly transform the district, it must be in place to allow for the transformation of learning and administrative practices.

The integration of our efforts related to strategy, people, process, and technology are key to our success in the Technology Infrastructure component. In this component, our **strategy** is to put in place a world-class technology infrastructure that fully supports our current and future needs in both the Process for Educating and the Business of Education. Through targeted professional development and a well-executed communications plan, our **people** will develop a strong understanding of the importance of our technology infrastructure and the accomplishment of our short and long term objectives. We must understand that there are no "short-cuts" or "easy-answers" to building a technology infrastructure to support the large scale and scope of our district. An established set of realistic expectations from our stakeholders will greatly facilitate implementation of the activities within this section. As we enhance our technology infrastructure, we must also implement best practice **processes** to maintain, monitor, and manage our huge technology enterprise. Once in place, computers, connectivity, and Internet access in all classrooms and offices will be commonplace. Our intent is to have a **technology** infrastructure that will be transparent to the everyday user of our systems.

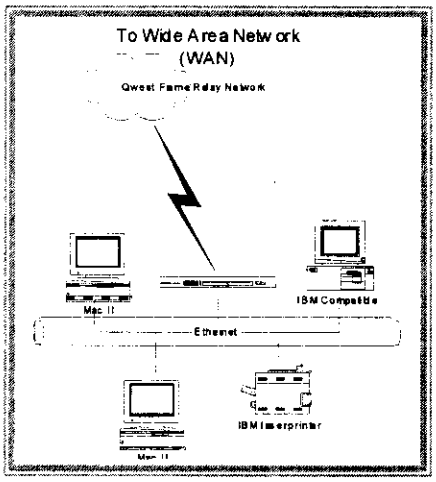
When one thinks about technology, computers are the first things that come to mind. There have been many national studies that have been performed to assess the optimal ratio of computers to students. This is based upon the premise that the number of computers in classrooms is the most important factor in increasing student achievement. However, upon further assessment, it was found that technology equipment is not fully utilized in classrooms. As discussed above, professional development followed by technology-enhanced lesson plans is also key elements required to truly improve student achievement in addition to actual computers. Our priorities implementing technology are as follows:

1. A Computer ratio of 1:1 for teachers
2. A computer ratio of 10:1 for students

While the 10:1 ratio is below countrywide norms, APS has decided to purchase rolling carts containing laptops. These carts will be made available to the students when the lesson plan calls for them, thus effectively increasing the utilization of equipment well beyond the industry norm. This will reduce the district's investment in technology and allow for the investment in other critical initiatives as they are defined. It is clear that the technology industry is changing rapidly and new technology devices are being developed with more flexibility and functionality at cheaper costs. The District will assess leasing verses buying of technology equipment to provide more flexibility to replace equipment with newer technology as it becomes available.

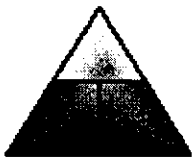
T1 to T3 is an example of expanding capacity that can be obtained from the phone companies

We have already established a wide area network (WAN) to support the existing requirements while allowing for easy expansion as demand for network services grows. All school sites are connected with at least a single T1 leased communication line. A dedicated T1 line identifies the maximum capacity (bandwidth) of communications traffic that can be handled. This service is provided by our local phone company and can be upgraded to support added volume by adding additional circuits or larger circuits.



The main point of entry to each school site contains the network hardware to support voice, video and data signals from other school sites, video distribution centers, the district administrative facilities and the Internet. Although the technology is capable of supporting voice, video and data signaling, the current configuration of this equipment supports transmission of data traffic only. Configuration changes and additional hardware components may be necessary to enable converged networking. Converged networking is a concept of using the districts network to support voice and video in addition to data. Studies suggest that the total cost of ownership will decrease by combining these services on a single network.

Once the connection to the schools is established, each school site is responsible for designing, implementing and supporting local area networks (LAN). Although common LAN standards have been discussed and communicated, there is no policy to govern compliance with this standard across all of the district facilities. Each school site executes vendor selection from approved vendors, needs assessment and implementation often independent of the district networking team.



The success of each school to effectively establish a technology infrastructure varies dramatically. Even the successful schools may not be able to effectively use district-wide capabilities because standards and guidelines have not been established or enforced. Technical standards improve success because they limit the large amount of time many IT professionals spend investigating alternatives and "tinkering" with new solutions. They also allow us to maintain and share critical expensive resources and to effectively share configurations and learning within the technology group.

Student achievement will be aided by the dissemination of information to key users, including students, parents, and teachers. Operational efficiency will also be achieved by providing accurate and relevant data to key users, including employees, business administrators, and District partners and vendors. An education portal will be developed to allow students, parents, teachers, administrators and vendors to access authorized information. However, an education portal does not provide the application or functionality of an information system, but rather aggregates the information and makes it conveniently accessible to the user along with external content.

The District has seen, and continues to make, dynamic technological advancement because of funding provided by programs such as E-rate and other federal technology grants. The district will continue to pursue all available funding opportunities.

5.2 CRITICAL TMP TECHNOLOGY INFRASTRUCTURE ACTIVITIES

Critical technology infrastructure activities have been defined that will provide the foundation to support the transformation of the district. Each of these activities will be briefly defined below.

Internet Connectivity - will be expanded using the E-rate funding program established by the Federal Government. Funding for the current year has been approved to connect the classrooms in 41 schools. This plan also provides for wiring ½ of the remaining classrooms to meet the districts standards. The remaining classrooms have already been wired with at least three connections and will receive wireless connectivity to expand support for additional computers.

RESTRUCTURED TECHNICAL SUPPORT - with the support of E-rate funding, the technical support infrastructure (people and hardware) will be restructured and expanded to better meet the increased needs of the district. The implementation of this plan will significantly increase the requirements for both help-desk and technical support. It is essential that we support and maintain the new technologies that are implemented.

Hardware Refresh – The district's desktop and server hardware will be refreshed on a 4-year

cycle

TECHNOLOGIES DEPARTMENT RESTRUCTURE – With the implementation of new systems and the restructuring of district processes, the Technologies Department must restructure itself in order to operate new systems and provide better support. This restructuring will include not only changes in the organizational chart and reporting structures, but the redefinition of job functions and pay scales

Education Portal Infrastructure - will include the technical and functional/process changes necessary to implement an enterprise portal and content management strategy defined by the district. This project will define the functional and technical requirements, perform a software fit analysis, implement the chosen solution and provide assistance with training district stakeholders to utilize the system.

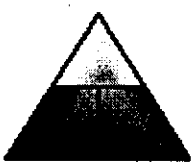
Enterprise Security - is an overall category incorporating the development of an comprehensive district-wide security program for the district including user authentication, password requirements and specifically three significant district components: Enterprise Directory Services, Firewall/Intrusion Detection, and Enterprise Virus Protection.

Network Management - will consider network management requirements and techniques and will assess the need for a network management service provider to provide support for an ever changing and complex network infrastructure to support current and future computing needs.

Data Management - will address development of an overall data management strategy for the district. This would entail determination of all data asset categories in the district, data sources and data uses. In order to accomplish this, an overall assessment will be required. This assessment provides the data required to appropriately address Enterprise Storage and Enterprise Backup & Recovery.

Technology Infrastructure Standards and Policies - will become more critical as the District relies on technology to support instruction and other key business functions. It is particularly important to develop standards and the expectation that individual groups conform to these enterprise standards during the early stages in the evolution of a technology organization. Consistent standards development and compliance improve the agility and capability of the technology infrastructure to support, adapt and make transitions. As the capabilities of technology become more intertwined with the delivery of education, the desire for inter-school cooperation and exchange will grow dynamically. It is the adherence to common standards that will enable these groups that function quite independently to integrate and exchange information efficiently over time.

For all practical purposes, the operating procedures for an IT organization should contain a group of policies that is complementary to the information systems strategy and architecture.



The Gartner Group has summarized ten policies that should be in place and further states that they are "necessary and effective" for an organization. APS will develop the policies listed below:

- **Sourcing Policy:** prescribes the decision making criteria for determining in-house or external providers of support
- **Security Policy:** covers the arrangements for protecting the enterprise from physical or electronic threats. This should include the assessment of the need and provision for disaster recovery or business continuity preparation.
- **Data Privacy Policy:** clearly define authorized access to district data
- **Quality Policy:** describes how quality is defined and achieved in the context of the enterprise
- **Operations Activity Policy:** can be covered by referencing an IT infrastructure library
- **Procurement Policy:** describes the procurement process and states who and with what approvals purchases can be made
- **Electronic Communications Policy:** states the acceptable and expected uses of electronic communication in the enterprise
- **Desktop Environments:** outlines the standards for desktop configurations
- **Behaviors, Values, and Service Culture:** defines the customer service standards for the Technology staff to follow.

These policies should not be informally passed through word of mouth or course of action; rather they are documented and reviewed regularly for necessary changes or updates. These policies should be easy to reference by all individuals in the organization. These policies should be monitored and enforced as operating procedures that can drive standardization and efficiencies and in many cases can produce savings to the enterprise.

Our vision of the future is a completely integrated communications environment that has the capability of supporting all voice, video, and data traffic throughout the District. The design is expandable to meet the constantly increasing needs of the parents, students, teachers, school administrators, district administrators and other stakeholders. The network standards need to be defined to reflect the currently recognized technology while still providing a path for migrating to new technologies in the future.

In addition to the network infrastructure, the district infrastructure for data management and application support will be updated to provide for common pools of storage, centralized backup and recovery and centralized security for all district applications. This model will include server equipment at the school site to support site-specific applications. The model will attempt to leverage centralized storage for all sites to simplify management and control of data and facilitate the backup and recovery process.

The district will continue to evaluate opportunities to leverage outside expertise to provide the highest quality technical support while maintaining an efficient overall cost structure. In some cases, the cost of outsourcing some key network and systems' management functions can more than outweigh the burden of increased personnel training and retention costs for the highly technical skill sets required to support the latest technologies. Regardless of outsourcing opportunities, the district will retain the responsibility to manage outsourcing vendors and making critical IT management decisions, needs a core team to manage the vendors and make all key decisions.

5.3 Major Projects and Activities

This table contains the major activities and projects that directly impact student learning. Click on the project title to go to the project detail.

Project ID	Project Title	Supports District Goal:	Method of Support
TI-1	Student computer refresh	1: Students demonstrate academic achievement	Provides current technology (no more than 4 years old) in all instructional environments
TI-2	District portal	3: All schools have a safe and secure learning environment	Provides a stable and safe method to access district online resources
TI-3	Network monitoring	3: All schools have a safe and secure learning environment	Assures a stable network infrastructure
TI-4	Wiring schools	3: All schools have a safe and secure learning environment	Provides a standard, stable, and safe network infrastructure for all schools
TI-5	Enterprise security	3: All schools have a safe and secure learning environment	Provides a safe network by preventing unauthorized access
TI-6	EPSS alignment with technology	4: The district demonstrates 100% alignment of programs and budget to district priorities	Ensures the technology components specified in a site's EPSS aligns with the district's technology master plan.
TI-7	Communication plan	4: The district	Provides the

Project ID	Project Title	Supports District Goal:	Method of Support
		demonstrates 100% alignment of programs and the budget to district priorities	infrastructure for a coordinated district-wide electronic communication and collaboration platform
TI-8	Data equipment moves	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Provides coordinated and aligned support for servers currently maintained by various departments
TI-9	E-rate funding and planning	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Ensures that E-rate funding and projects will be planned and aligned with existing district projects
TI-10	VOIP	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Investigation of VOIP to align with current district communication and data infrastructure, as well as allow for future growth and feature enhancement
TI-11	Department reorganization, to include internal professional development	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Restructuring of Technologies department organization and structure will provide more coherent and seamless support for the district's technology efforts
TI-12	Data warehouse	4: The district demonstrates 100% alignment of programs and the budget to district priorities	Allows integrated access to data across the district's various information systems
TI-13	SIS infrastructure	7: APS employees demonstrate high performance	Provides the computer and network infrastructure that supports the district's student information system

Project ID	Project Title	Supports District Goal:	Method of Support
TI-14	Technical support center	7: APS employees demonstrate high performance	Provides technical support allowing employees to perform at a higher level, due to smoothly functioning technology
TI-15	Staff computer refresh	7: APS employees demonstrate high performance	Provides current technology (no more than 4 years old) for all administrative and business offices